Lindsey, Doug

From: Michael Bazylenko [biochips@bigpond.net.au]
Sent: Thursday, August 17, 2006 11:01 PM
To: Lindsey, Doug
Subject: chargeback jun06-16 and 10566482


USPTO claims.doc


USPTO-PCT.doc


ATT2018497.txt

Hi Doug,
I disputed the above Master Card transaction through my bank as it was significantly higher than I estimated based on existing USPTO fees and charges. Having received and reviewed the supporting docs I now realised where the problem was. Apparently, USPTO mistakenly charged me 1,000$ for 60 claimes, whereas my PCT, as filed in US, has only 20 claims, which should be processed free of charge. The 1000$ will need to be refunded. I attached electronic copies of the original correspondence mailed to USPTO confirming the number of claims.
Thank you for your help in resolving this.
Regards,
Michael.

8/17/06 CLAIMS TO BE SUBMITTED FOR U.S. PATENT APPLICATION # 10566482 ATTACHED

$1,000.00 SALE NOT AUTHORIZED BY CUSTOMER. DOUG LINDSEY

Refund Ref:
08/22/2006 0030034000

Credit Card Refund Total: $1000.00

Master C: XXXXXXXXXXXX9690

Adjustment date: 08/22/2006 DLINDSEY
05/30/2006 PBOOKER 00000010 10566482
02 FC:2615 -1000.00 OP

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05/30/2006 PBOOKER 00000010 10566482
02 FC:2615 -1000.00 OP

UNITED STATES PATENT AND TRADEMARK OFFICE

Chief Financial Officer and Chief Administrative Officer

05 July 2006

COPY FOR YOUR INFORMATION

TO: Mellon Bank Electronic Services Division
Attn: Chargeback Area

FROM: MATTHEW LEE

SUBJECT: Request for Information

We have received a request for information from your office stating that the cardholder does not recognize a $ 1,380.00 charge processed by USPTO on 30 May 2006 against his credit card and requests support. The PCT application number associated with the sale in question was **10566482**. Michael Bazylenko is listed as the inventor for the application in question. It would appear that with the NOTICE OF ACCEPTANCE dated 31 May 2006 that additional fees were owed for the PCT application fee.

Please note that USPTO's Office of Finance would not locate any documentation showing that the customer authorized the sale in question. If the customer did not intend to pursue this PCT application, i.e., he intended to let the PCT application go abandon, the USPTO's Office of Finance will refund the customer the $ 1,380.00 in question. Please contact the USPTO's Office of Finance at the telephone number noted below and reference CHARGEBACK **JUN06-16.** The request for a refund can also be faxed to (571) 273-6500, attention Douglas M. Lindsey.

USPTO requests that the CHARGEBACK AREA take no action at this time concerning refunding the customer as the charge in question appears to be appropriate. Please have the customer review and if a $ 1,380.00 is inappropriately processed please notify the USPTO's Office of Finance.

If you have further questions you can contact Douglas M. Lindsey at (571) 272-6344.

Reference USPTO CHARGEBACK **JUN06-16**.

Thank you in advance.

PTO-1390 (Rev. 07-2005)
Approved for use through 3/31/2007. OMB 0651-0021
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

U.S. APPLICATION NO (If known, see 37 CFR 1.5)	INTERNATIONAL APPLICATION NO.	ATTORNEY'S DOCKET NUMBER
10/560482	PCT/AU2005/000552	

20. Other items or information:

"Notes in response to issues raised in the ISR" - 1 page

The following fees have been submitted	CALCULATIONS	PTO USE ONLY
21. ☐ Basic national fee (37 CFR 1.492(a)) $300	$ 300	
22. ☐ Examination fee (37 CFR 1.492(c)) If the written opinion prepared by ISA/US or the international preliminary examination report prepared by IPEA/US indicates all claims satisfy provisions of PCT Article 33(1)-(4) ..... $0 All other situations $200	$ 200	
23. ☐ Search fee (37 CFR 1.492(b)) If the written opinion of the ISA/US or the International preliminary examination report prepared by IPEA/US indicates all claims satisfy provisions of PCT Article 33(1)-(4) ..... $0 Search fee (37 CFR 1.445(a)(2)) has been paid on the international application to the USPTO as an International Searching Authority ..... $100 International Search Report prepared by an ISA other than the US and provided to the Office or previously communicated to the US by the IB ..... $400 All other situations $500	$ 0	COPY FOR YOUR INFORMATION
TOTAL OF 21, 22 and 23 =	500	
☐ Additional fee for specification and drawings filed in paper over 100 sheets (excluding sequence listing in compliance with 37 CFR 1.821(c) or (e) or computer program listing in an electronic medium) (37 CFR 1.492(j)). The fee is $250 for each additional 50 sheets of paper or fraction thereof.		
Total Sheets: 37 - 100 = / Extra Sheets: /50 = / Number of each additional 50 or fraction thereof (round up to a whole number): 0 / RATE: x $250	$ 0	
Surcharge of $130.00 for furnishing any of the search fee, examination fee, or the oath or declaration after the date of commencement of the national stage (37 CFR 1.492(h)).	$	

CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE	
Total claims	20 - 20 =	0	x $ 50	$ 0
Independent claims	3 - 3 =	0	x $200	$ 0
MULTIPLE DEPENDENT CLAIM(S) (if applicable)			+ $360	$
TOTAL OF ABOVE CALCULATIONS =				$
☒ Applicant claims small entity status. See 37 CFR 1.27. Fees above are reduced by ½.				250
SUBTOTAL =				$ 250
Processing fee of $130.00 for furnishing the English translation later than 30 months from the earliest claimed priority date (37 CFR 1.492(i)). +				$
TOTAL NATIONAL FEE =				$ 250
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). $40.00 per property +				$
TOTAL FEES ENCLOSED =				$ 250
			Amount to be refunded:	$
			Amount to be charged	$

Amended list of claims for PCT/AU2005/000552 for filing with USPTO.

THE CLAIMS DEFINING THE INVENTION (AS AMENDED) ARE AS FOLLOWS:

1. A biochip for testing biological substances comprising a plurality of binding sites, optical means for determining a specific binding event at each binding site, wherein the plurality of binding sites and the means for determining a specific binding event at each binding site are monolithically integrated into a single chip which is electrically powered and produces electrical signals in response to binding events at each binding site.
2. A biochip in accordance with claim 1 wherein the means for determining a specific binding event comprise at least one light source and at least one photodetector associated with each binding site.
3. A biochip in accordance with claim 2 said biochip further comprising a first plurality of electrodes for individually controlling each light source and a second plurality of electrodes for individually controlling each photodetector.
4. A biochip in accordance with claim 2 wherein either or both the light sources and the photodetectors are implemented in a thin film semiconductor layer.
5. A biochip in accordance with claim 4 wherein the light sources and photodetectors are implemented in the same semiconductor thin film layer.
6. A biochip in accordance with claim 4 wherein the semiconductor thin film material comprises semiconductor polymer.
7. A biochip in accordance with claim 4 wherein the thin film light source is a microcavity light source.
8. A biochip in accordance with claim 4 wherein the thin film photodetector is a microcavity photodetector.
9. A biochip in accordance with any of the preceding claims wherein the means for determining a binding event at each binding site further comprise at least one planar optical waveguide, the evanescent field of light propagating in the waveguide interacting with the biological substance under test.

10. A biochip in accordance with any of the preceding claims wherein the means for determining a binding event at each site comprise means for determining a refractive index change associated with a binding event.

11. A biochip in accordance with claim 10 wherein the means for determining refractive index change comprise a first planar waveguide on surface of which the binding event occurs, a second planar waveguide located below the first waveguide and separated by coupling layer of lower refractive index than that of the two waveguides.

12. A biochip in accordance with claim 10 wherein the means for determining refractive index change comprise a first planar waveguide on surface of which the binding event occurs, a grating formed in said waveguide, a second planar waveguide located below the first waveguide and separated by coupling layer of lower refractive index than that of the two waveguides.

13. A biochip in accordance with any of the preceding claims wherein the means for determining a binding event further comprise a reference light paths provided at each binding site for error correction.

14. A biochip in accordance with any of the preceding claims wherein the biochip comprises a further plurality of electrodes to control hybridization conditions at each binding site.

15. A biochip in accordance with claim 14 wherein the electrodes comprise resistive heater electrodes formed underneath individual binding sites or groups of biding sites.

16. A method of manufacturing a biochip containing light sources, photodetectors, binding sites and optical means for determining a specific binding event at each binding site wherein said light sources, photodetectors, binding sites and optical means for determining a specific binding event at each binding site are produced by processing a single planar substrate in a sequence of deposition, photolithography and etching steps.

17. A method of manufacturing a biochip in accordance with claim 16, said method comprising steps of (i) forming a first plurality of electrodes that are optically

non-transparent; (ii) forming at least one semiconductor layer; (iii) forming a second plurality of electrodes that are optically transparent; (iv) forming at least one planar waveguide layer; (v) forming means of in- and out-coupling for the waveguide layer; and (vi) forming a plurality of binding sites on top on the surface of the waveguide layer.

18. A method of testing a biological substance comprising steps of disposing the substance over a plurality of binding sites, hybridization of the substance to the binding sites and detecting the sites at which the binding events occurred using optical means, said method further comprising the use of a single biochip which is electrically powered and produces electrical signals in response to binding events at each binding site.

19. A method in accordance with claim 18, wherein the biochip allows for in-situ monitoring and detection of binding events at each binding site during the hybridisation.

20. A method in accordance with claim 19 wherein in-situ monitoring and detection comprises generating an optical signal at each binding site and then receiving a corresponding electrical signal from each binding site that contains information about the interaction of the optical signal with the biological substance at each binding site.